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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,422	11/05/2003	Ernst Engler	A01498	8336

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ROHM AND HAAS COMPANY
PATENT DEPARTMENT
100 INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19106-2399

EXAMINER

ROGERS, JAMES WILLIAM

ART UNIT	PAPER NUMBER
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1618

MAIL DATE	DELIVERY MODE
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05/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/702,422	Applicant(s) ENGLER ET AL.	
	Examiner James W. Rogers, Ph.D.	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/23/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants amendments to the claims filed 03/23/2007 have been entered. Any rejection/objection from the previous office action dated 02/27/2007 not addressed below have been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattox (4,906,274, '274 from hereon) in view of Mattox (EP 0,490,565 A1, cited by applicant, '565 from hereon) in view of Payne et al. (WO 95/00019, cited by applicant). This new rejection was necessitated by amendment.

'274 discloses compositions containing 0.1-99.9% of 3-isothiazolones (including DCOIT), 0.1-99.9% of an orthoester stabilizer and 0-99.8 % of an organic solvent. See col 1 lin 4-35, lin 60-col 2 lin 45. '274 discloses many uses of the composition including its use as a preservative in aqueous dispersions and coating emulsions (e.g. paints). See col 3 lin 29-47 and col 4 lin 21-66. Additional stabilizers including copper salts can also be employed, while '274 is silent on the amount of copper the patent incorporated by reference US pat No. 3,870,795 which states "generally, the metal nitrate or nitrite is used to stabilize the isothiazolone solution in an amount of about 1 percent to about 30 percent" within applicants claimed range. See col 3 lin 15-28 of '274 and col 1 lin 65-col 2 lin 10 and col 3 lin 25-39 of US 3,870,795.

'274 does not disclose the amount of water in the aqueous dispersion or coating emulsions contemplated for use nor does '274 mention the use of inorganic fillers, emulsifiers and thickeners.

'565 discloses isothiazolone concentrate compositions comprising a) 0.01 to 50 parts of 3-isothiazolone (including DCOIT), b) 0.0001 to 10 parts copper salt and c) optionally 40 to 99.9899 parts organic solvent including di-glycols; '565 also discloses

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compositions containing from 0.01 to 30 weight of the a-c composition above in water with an emulsifier. See page 2 lin 41-page 3 lin 49, examples part 3 and claims 1-3 and 10. Regarding the limitation that the composition contains at least one inorganic filler, '565 in example 3, a paint formulation, lists the use of Ti-Pure R-902 a known titanium dioxide pigment used in coatings as evidenced by the teachings of DuPont's product brochure on titanium dioxide products used in coatings (cited in last action). While '565 does not mention kaolin in the description or examples, kaolin is simply a mineral found in clay and '565 does disclose the use of Attagel 50 a known clay material, therefore it is obvious that Attagel 50 clay will contain kaolin. It would have been obvious to one with skill in the art that since aqueous isothiazolone compositions of '565 were disclosed as having from 0.01 to 30 weight of isothiazolone, organic solvent and copper salt that the aqueous applications contemplated for use in '274 could also use the same amount of the above ingredients in the aqueous dispersions disclosed. One with skill in the art would have a reasonable expectation of success in combining the concentrations of ingredients in an aqueous composition disclosed in '565 with the ingredients of '274 because the patents are generally related as being drawn to the same general field of endeavor, isothiazolone biocide compositions and the patents share several of the same ingredients such as DCOIT, solvents and copper salts. The broad concentrations of isothiazolone, organic solvent and copper salt in '274 and the amount of those ingredients used in aqueous applications as disclosed in '565 meets applicants claimed weight percents for those ingredients by combination.

Payne is used primarily for the disclosure within that thickeners such as Xanthan gum were useful in aqueous compositions containing 3-isothiazolone as a biocide, the composition was said to be useful as a preservative in paint. Xanthan gum was said to aid in suspension of particulate matter, reduce sedimentation and increase viscosity. See abstract, page 1 lin 6-36, page 2 lin 19-37, page 4 lin 3-10 and claims 1-2.

It would have been prime facie obvious at the time of the invention to a person of ordinary skill in the art to modify the 3-isothiazolone composition disclosed in '274 and add the inorganic fillers and surfactants of '565 and the Xanthan gum thickener disclosed within Payne. It is generally considered to be prime facie obvious to combine compounds each of which is taught by the prior art to be useful for the same purpose in order to form a composition that is to be used for an identical purpose. The motivation for combining them flows from their having been used individually in the prior art, and from them being recognized in the prior art as useful for the same purpose. There is also clear motivation for the skilled artisan to combine the thickener in Payne with the compositions of the Mattox references '274 and '565 to aid in the suspension of particulate matter, reduce sedimentation and to adjust the viscosity of the composition. One with skill in the art would have a reasonable expectation of success in combining the above references since they are all related in the same field of endeavor and their composition makeup is very similar in that they all disclose aqueous 3-isothiazolone biocide compositions. The advantage of such a composition as already disclosed above would be that the particulates would be suspended, there would be less sedimentation within the composition and the viscosity could be adjusted by simply adjusting the

amount of thickener. Also the use of thickener as disclosed by Payne would reduce the amount of organic solvent necessary, a distinct advantage since there is increasing demand to decrease the use of volatile organic compounds in all industries. As shown by the recited teachings, instant claims are no more than the combination of conventional components of biocide compositions useful in preserving paint products. It therefore follows that the instant claims define prime facie obvious subject matter.

Claims 1,3-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattox (4,906,274, '274 from hereon) in view of Mattox (EP 0,490,565 A1, cited by applicant, '565 from hereon) in view of Payne et al. (WO 95/00019, cited by applicant) in view of Kostansek et al. (EP 1,060,667 A2, cited in last action) and in view of Gerigk et al. (US 5,332,430, cited in last action). This new rejection was necessitated by amendment.

'274 is disclosed above. '274 is silent on the method to produce the compositions by dissolving DCOIT in solvent before addition of the other ingredients and is silent on melting DCOIT before addition of the other ingredients. '274 does not disclose the amount of water in the aqueous dispersion or coating emulsions contemplated for use nor does '274 mention the use of inorganic fillers and thickeners.

'565 is disclosed above and is combined with the main reference '274 in the same manner.

Payne is disclosed above and is combined with the main reference '274 in the same manner.

Kostansek is used primarily for the disclosure within that the method of melting an active (biocides are specifically mentioned), before addition of the other ingredients was already well known in the art at the time of the invention. Kostansek is also used for the disclosure within that the melted active can also contain a solvent that it is soluble in, thus meeting the limitation of claim 10. See abstract, [0002]-[0005],[0008]-[0011] and claims 1-3. The disclosed advantage of producing a suspension concentrate of a biocide in this manner was that the method produced small particles. It was disclosed that the efficiency of the pesticides (species of biocide) is often related to the size of the pesticide particle, typically the smaller the particle the greater the efficiency due to factors such as increased release rate and wider and more uniform coverage upon application.

Gerigk is used only for the disclosure that paint systems containing biocides may contain fillers such as kaolin. See col 1 lin 49-col2 lin 7, col 4 lin 64-col 5 lin 22.

It would have been prime facie obvious to a person of ordinary skill in the art at the time the claimed invention was made to combine the art described in the documents above because as above the combination of '274, '565 and Payne discloses all of applicants claimed invention except for the use of kaolin and applicants claimed procedure to make the composition as in claim 10. However Kostansek discloses the same method to make the composition and Gerigk discloses the use of kaolin in paint formulations. The motivation to combine the above documents would be a method to produce an aqueous DCOIT composition by melting/dissolving the biocide prior to addition of other ingredients. The advantage of this methodology would be that the

biocide particles produced are small, thus increasing the release rate and providing more uniform coverage of the biocide upon application. One with skill in the art would have a reasonable expectation of success in combining the above references since they are all related in the same field of endeavor and their composition makeup is similar in that they all disclose suspensions containing biocides. Thus, the claimed invention, taken as a whole was *prima facie* obvious over the combined teachings of the prior art.

Conclusion

No claims are allowed at this time.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

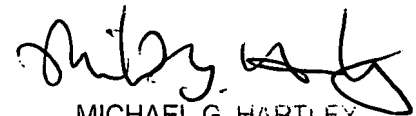
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 271-0616. The fax phone number for the organization where this application or proceeding is assigned is 572-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Mike Hartley", is positioned above the printed name.

MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER